

ABSTRACT

HAEMATOLOGICAL SCORING SYSTEM: AN EARLY PREDICTOR OF NEONATAL SEPSIS AS COMPARED TO BLOOD CULTURE

Neonatal sepsis is the commonest and the most important cause for the morbidity and mortality of neonates and symptoms of sepsis in neonates are subtle and non-specific. In order to diagnose the sepsis earlier certain haematological parameters are evaluated and each of them assessed to find the most suitable parameters and to compare the variables with other laboratory parameters.

MATERIALS AND METHODS:

This prospective observational study includes 103 neonates (<28 days). Haematological parameters like total leucocyte count (TLC), total polymorphonuclear neutrophil count (PMN), immature polymorphonuclear neutrophil count (iPMN), immature: Total (I:T) PMN ratio, immature: mature (I:M) PMN ratio, platelet count, degenerative or toxic changes in neutrophils were assessed and scored according to Manisha makkar et al.

Score of ≤ 2 : sepsis unlikely

Score 3-4: sepsis possible

Score ≥ 5 : sepsis very likely

The scores were compared with clinical parameters and the most predictive factor was identified.

RESULTS:

IT PMN ratio, immature PMN count and degenerative changes have high positive predictive value. IT PMN has the good sensitivity and excellent specificity and positive predictive value. Degenerative changes have poor sensitivity but good specificity and positive predictive value. Immature PMN and I:T PMN ratio had better negative predictive value than other parameters.

CONCLUSION:

Hematological scoring system is a quick, simple, reliable and cost effective tool for the early diagnosis of neonatal sepsis.

Key Words:

Total leucocyte count, Total polymorphonuclear neutrophil count, immature polymorphonuclear neutrophil count.